

IN THE ABSTRACT OF THE DISCLOSURE:

Please **AMEND** the Abstract as follows.

Page 1, line 1, change "ABSTRACT" to
--Abstract of the Disclosure--;
line 11, delete "(T1)";
line 12, change "are" to --can be--;
line 13, change "is" to --can be--;
line 14, delete "(T3, T6, T8)";
line 16, change "are" to --can be--;
line 17, change "is" to --can be--;
line 18, delete "(T4, T7, T8)";
line 20, delete "the" (second occurrence only);
line 21, delete "(T8, T9)".

R E M A R K S

STATUS OF CLAIMS

In the Office Action, claims 1-6 were noted as pending in the application and all claims were rejected. In addition, the specification and the Information Disclosure Statement filed September 14, 1992, were objected to. The objections and rejections are addressed separately below.

OBJECTION TO THE INFORMATION DISCLOSURE STATEMENT

On page 2, paragraph 1, the Office Action objected to the Information Disclosure Statement filed on September 14, 1992 with the subject application. The Information Disclosure Statement filed September 14, 1992 had an accompanying Form PTO-1449 which listed incorrect publications.

By separate paper, another Information Disclosure Statement has been filed to accompany the subject Amendment. This Information Disclosure Statement includes a Form PTO-1449 listing publications cited in the International Search Report of March 13, 1992 (i.e., JP-A 61-154820 and 61-197218, which were relied upon in the rejection of claims 1-3 under 35 U.S.C. §103 in the subject Office Action mailed May 4, 1993).

REJECTION OF CLAIMS 4-6 UNDER 35 U.S.C. §101

On page 2, paragraph 2 of the Office Action, claims 4-6 were rejected under 35 U.S.C. §101 as directed to non-statutory subject matter. However, the Office Action indicates that claims 4-6 would be deemed statutory under 35 U.S.C. §101 if amended to include a step or means of injection molding.

By the present Amendment, claims 4-6 have been amended as suggested in the Office Action to recite a step or means of injection molding, to provide increased post-solution activity to further render claims statutory under 35 U.S.C. §101. Withdrawal of the rejection of claims 4-6 under 35 U.S.C. §101, is requested.

**OBJECTION TO THE SPECIFICATION
UNDER 35 U.S.C. §112, FIRST PARAGRAPH**

On page 3, paragraph 1 of the Office Action, the specification was objected to under 35 U.S.C. §112, first paragraph, as allegedly failing to adequately teach how to make and/or use the invention. Specifically, the Office Action alleges that the specification does not teach how to determine the points of a pressure waveform or how to determine whether a straight or arcuate waveform should be chosen.

The portion of the claimed invention relevant to the objection to the specification under 35 U.S.C. §112, first paragraph, is directed to methods or machines for modifying a portion of an injection pressure waveform by assigning two points in the injection pressure waveform if a straight line is to be interpolated between these two points, or by assigning three points in the injection pressure waveform if a curve is to be interpolated between these three points, to modify the injection pressure waveform without the need to reenter the entire injection pressure waveform for the injection/dwell stage of an injection molding operation. Therefore, the claimed invention can be used, for example, as explained on page 3, lines 6-23 of the specification, for molded articles have molds which are similar. Thus, if the injection pressure waveform for one mold is known, it may be

possible to use the injection pressure waveform corresponding to this mold with only minor modifications to the injection pressure waveform. Also, as explained on page 3, line 24 - page 4, line 8 of the specification, the injection pressure waveform may indicate a sudden change in pressure which the injection molding machine may be unable to follow. By modifying a part of the injection pressure waveform, the injection pressure waveform can be modified such that the injection molding machine can follow the modified injection pressure waveform. The above applications are merely examples of ways in which the claimed invention can be used.

Although a determination of the specific points of a pressure waveform or a determination of whether a straight or curved waveform should be chosen to modify an injection pressure waveform, might be relevant to producing a particular molded article, such determinations are not particularly relevant to the claimed invention, i.e., a method or machine for modifying an injection pressure waveform for an injection/dwell stage of an injection molding machine. In other words, the claimed invention is directed to methods or machines for providing the capability to modify an injection pressure waveform for an injection molding machine, rather than to any particular molded article. Therefore, it is submitted that the specification does in fact teach how to make and/or use the invention adequately to meet the requirements of 35 U.S.C. §112, first paragraph. Thus, the objection to the specification under 35 U.S.C. §112, first paragraph, is respectfully traversed. Withdrawal of the objection is requested.

REJECTION OF CLAIMS 4-6 UNDER 35 U.S.C. §112, FIRST PARAGRAPH

On page 3, paragraph 2 of the Office Action, claims 4-6 were rejected under 35 U.S.C. §112, first paragraph.

For the reasons stated above with respect to the objection to the specification under 35 U.S.C. §112, first paragraph, the rejection of claims 4-6 under 35 U.S.C. §112, first paragraph, is respectfully traversed. Withdrawal of the rejection is requested.

REJECTION OF CLAIMS 4 AND 5 UNDER 35 U.S.C. §112, SECOND PARAGRAPH

On page 3, paragraph 3 of the Office Action, claims 4 and 5 were rejected under 35 U.S.C. §112, second paragraph. The Office Action indicates specific objections to claims 4 and 5 in paragraphs 4 and 5 of the Office Action.

By the present Amendment, it is submitted that claims 4 and 5 have been amended as necessary to overcome the rejection of claims 4 and 5 under 35 U.S.C. §112, second paragraph. Withdrawal of the rejection is requested.

REJECTION OF CLAIMS 1-3 UNDER 35 U.S.C. §103

On page 2, paragraph 3 of the Office Action, claims 1-3 were rejected under 35 U.S.C. §103 as being unpatentable over JPA 61-197218 in view of JPA 61-154820.

JPA 61-197218 discloses a monitoring system for an injection molding machine, in which a pressure waveform which has actually produced the optimum results, is stored and compared with a pressure waveform detected at the time each injection operation is performed, to determine whether correct molding was performed in an injection operation. If the system determines that a defective molding operation has occurred, then the operation of the molding machine is suspended.

JPA 61-154820 discloses a method for controlling the injection pressure of an injection molding machine. A servomotor is controlled in dependence upon the difference or error between a detected pressure exerted on an injection screw, and a set value of the injection pressure. The detected pressure is fed back to the servomotor for driving the screw in the forward or backward direction.

In contrast, by the present Amendment, claim 1 has been amended to recite a step of adjusting a molding condition and a step of detecting a pressure acting on resin during an injection/dwell stage when a conforming molded article is obtained as an injection pressure waveform based on a function of time, using the adjusted molding condition, and a step of setting the

detected injection pressure waveform as a target injection pressure waveform for pressure feedback control in the injection/dwell stage. It is submitted that the combination of JPA 61-197218 and 61-154820, fails to disclose a method in which molding conditions can be adjusted and used to obtain an injection pressure waveform as a function of time by detecting a pressure acting on the resin during the injection/dwell stage, and by setting this detected injection pressure waveform as a target injection pressure waveform for feedback control in the injection/dwell stage. Thus, it is submitted that claim 1 as amended patentably distinguishes over the prior art.

Claims 2-3 depend directly from claim 1 and include all the limitations of that claim. Thus, for the reasons stated above with respect to claim 1 as amended, it is submitted that claims 2 and 3 should also patentably distinguish over the prior art.

Accordingly, it is submitted that claims 1-3 have been amended as necessary to overcome the rejection under 35 U.S.C. §103. Withdrawal of the rejection is requested.

REJECTION OF CLAIMS 4-6 UNDER 35 U.S.C. §103

On page 5, paragraph 5 of the Office Action, claims 4-6 were rejected under 35 U.S.C. §103 as being unpatentable over German Patent Application 2,916,782.

German Patent Application 2,916,782 discloses an injection molding machine in which pressure curves can be written on a screen with a light pen used by an operator. The abscissa and ordinate of the area for displaying the pressure curves on the screen are time and value of pressure or velocity, respectively. The data for each curve are stored in the memory 31.

In contrast, in the methods or machines recited in claims 4-6, interpolation is used with two points designated by an operator, to determine a straight line corresponding to a modified portion of an injection pressure waveform, or three points are used to determine a curve corresponding to a modified injection pressure waveform. Because an operator is required to trace the entirety of a modified

portion of an injection waveform whereas an operator need only designate points and whether a line or curve is to be interpolated using the points, it is submitted that claims 4-6 patentably distinguish over the prior art.

Accordingly, the rejection of claims 4-6 under 35 U.S.C. §103, is respectfully traversed. Withdrawal of the rejection is requested.

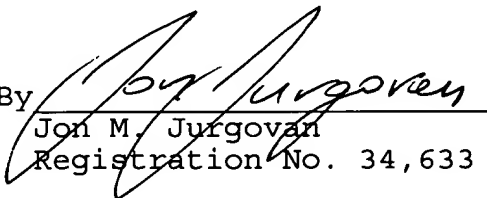
SUMMARY

It is submitted that a separate Information Disclosure Statement has been submitted to overcome the objection to the Information Disclosure Statement filed September 14, 1992. Also, it is submitted that claims 4-6 are directed to statutory subject matter under 35 U.S.C. §101, and that the specification and claims 4-6 meet the requirements of 35 U.S.C. §112. Further, it is submitted that claims 1-6 patentably distinguish over the prior art. Accordingly, reconsideration of claims 1-6 and an early Notice of Allowance are earnestly solicited.

If any additional fee is required in connection with the filing of this Preliminary Amendment, please charge the fee to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY

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